WHAT IS CLAIMED IS:

1. A method for preventing a change in the core body temperature of a mammal under cold conditions, said method comprising:

(a) detecting a requirement for thermal energy input in said mammal; and

(b) contacting a surface of a portion of said mammal in response to the presence of said requirement with a warm temperature medium under negative pressure conditions for a period of time sufficient to introduce thermal energy into the core body of said mammal;

whereby the core body temperature of said mammal is prevented from changing under said cold conditions.

2. The method according to Claim 1, wherein said requirement is detected by detecting the presence of a thermoregulatory error in said mammal.

3. The method according to Claim 1, wherein said thermoregulatory error is detected by detecting the presence of vasoconstriction in said mammal.

4. The method according to Claim 1, wherein said method further comprises enclosing said portion of said mammal in a sealed enclosure to produce an enclosed portion of said mammal.

5. The method according to Claim 1, wherein said method is a method of maintaining said core body temperature of said mammal substantially constant for a temporal duration of at least about 60 min and said method comprises performing steps (a) and (b) at least twice during said temporal duration.

6. The method according to Claim 1, wherein said portion of said mammal is a limb or a portion thereof.

7. The method according to Claim 6, wherein said limb is selected from the group consisting of an arm and a leg.

8. The method according to Claim 4, wherein said sealed enclosure has a pressure ranging from about –20 to –80 mm Hg.

9. The method according to Claim 1, wherein said warm temperature medium has a temperature ranging from about 44 to 48 °C.

10. The method according to Claim 1, wherein said period of time ranges from about 1 to 600 min.

11. The method according to Claim 1, wherein said mammal is a human.

12. A method for maintaining the core body temperature of a mammal substantially constant for a temporal duration of at least about 60 min under cold conditions, said method comprising:

(a) monitoring said mammal during said temporal duration for the presence of a thermoregulatory error; and

(b) contacting a surface of an enclosed portion of said mammal in response to the presence of said thermoregulatory error with a warm temperature medium under negative pressure conditions for a period of time sufficient to introduce thermal energy into the core body of said mammal;

whereby the core body temperature of said mammal is maintained substantially constant during said temporal duration.

13. The method according to Claim 12, wherein said thermoregulatory error is detected by detecting the presence of vasoconstriction in said mammal.

14. The method according to Claim 12, wherein said method further comprises enclosing said portion of said mammal in a sealed enclosure to produce an enclosed portion of said mammal.

15. The method according to Claim 12, wherein said portion of said mammal is a limb or a portion thereof.

16. The method according to Claim 15, wherein said limb is selected from the group consisting of an arm and a leg.

17. The method according to Claim 14, wherein said sealed enclosure has a pressure ranging from about –20 to –80 mm Hg.

18. The method according to Claim 12, wherein said warm temperature medium has a temperature ranging from about 44 to 48 °C.

19. The method according to Claim 12, wherein said period of time ranges from about 5 to 600 min.

20. The method according to Claim 12, wherein said mammal is a human.

21. A method for maintaining the core body temperature of a human substantially constant for a temporal duration of at least about 60 min under cold conditions, said method comprising:

(a) monitoring said mammal during said temporal duration for the presence of a vasoconstriction; and

(b) contacting a surface of an enclosed portion of said mammal in response to the presence of said vasoconstriction with a warm temperature medium under negative pressure conditions ranging from about –20 to –80 mm Hg for a period of time ranging from about 1 to 600 min;

whereby the core body temperature of said human is maintained substantially constant during said temporal duration.

22. A device for introducing thermal energy into the core body of a mammal under cold conditions, said device comprising:

(a) a means for detecting a requirement for thermal energy input in said mammal;

(b) a sealable enclosure for enclosing a portion of said mammal;

(c) a means for producing negative pressure conditions in said sealable enclosure; and

(d) a warming means for producing a warm temperature medium in said sealable enclosure.

23. The device according to Claim 22, wherein said portion of said mammal is a limb or portion thereof.

24. The device according to Claim 23, wherein said limb is selected from the group consisting of an arm and a leg.

25. The device according to Claim 22, wherein said means for detecting a requirement for thermal energy input in said mammal is a means for detecting a thermoregulatory error in said mammal.

26. The device according to Claim 25, wherein said means for detecting a requirement for thermal energy input in said mammal is a vasoconstriction detecting means.

27. The device according to Claim 22, wherein said means for producing a negative pressure in said sealable enclosure is capable of producing a negative pressure ranging from about –20 to –80 mm Hg.

28. The device according to Claim 22, wherein said mammal is a human.

29. The device according to Claim 22, wherein said sealable enclosure has a configuration selected from the group consisting of a sleeve, glove and boot.